Department of Pesticide Regulation

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STATUS REPORT FOR FUMIGANT PESTICIDES

March, 2002

I. SCHEDULED AIR MONITORING

The Air Resources Board (ARB) has conducted ambient air monitoring for methyl bromide, 1,3-dichloropropene, methyl isothiocyanate, MITC (generated from metam sodium), and chloropicrin during the 2001 pesticide use season. The air monitoring was completed during July and August 2001 in Kern County, and September through early November 2001 for Monterey and Santa Cruz counties. This monitoring should provide documentation of the impact of additional regulatory measures to mitigate the 2000 air monitoring levels. On February 28, 2002, ARB submitted to the Department of Pesticide Regulation (DPR) its draft report of methyl bromide and 1,3-dichloropropene monitoring in Monterey and Santa Cruz counties. DPR should complete its review and ARB should issue a final report at the end of March. ARB should submit to DPR a draft report of methyl bromide and 1,3-dichloropropene monitoring in Kern County at the end of March. Monitoring reports for the other chemicals will be completed later in 2002.

ARB also conducted air monitoring at an application site for chloropicrin in Monterey County to document short-term exposure levels. DPR collected side-by-side samples of methyl bromide for comparison. These reports are in preparation.

On February 15, 2002, methyl bromide registrants submitted to DPR a report describing air monitoring in high use areas of Ventura and Santa Barbara counties in 2001. The air monitoring was conducted under the protocol and requirements agreed to under the June 26, 2001 reevaluation.

DPR requested that ARB monitor a metam sodium fumigation applied through a drip irrigation system in 2001. Due to a lack of applications in 2001, ARB plans to conduct this monitoring in 2002 using its normal toxic air contaminant protocol and procedures. Also, at DPR's request, ARB plans to monitor a structural fumigation of sulfuryl fluoride in 2002 using a modified toxic air contaminant protocol and procedures.

ARB has a network of stations that routinely monitor California's air for a variety of pollutants such as ozone, particulate matter, metals, and other toxic air contaminants. In late 2001, ARB added methyl bromide and 1,3-dichloropropene to its routine monitoring network. ARB currently monitors for methyl bromide and 1,3-dichloropropene every 12 days at approximately 20 stations in primarily urban areas throughout the State.

II. ACUTE BUFFER ZONE MODELING

DPR utilizes a standard methodology to calculate buffer zones for acute exposures. Fumigant pesticide registrants and some grower groups have suggested some specific refinements to the current modeling methodology which they believe will improve the procedure and incorporate local information and more representative meteorological conditions. DPR will work with scientists from ARB, industry, and public interest groups to evaluate specific recommendations and consider possible refinements including use of regional weather files for modelling. This project was initiated in October 2001. The second and final workshop was held on December 13, 2001. The advantages and disadvantages of several different modeling approaches were discussed. Industry will continue to discuss and may propose revisions to DPR's modeling procedures.

III. METHYL BROMIDE

1. Risk Assessment/Data Evaluation

   - DPR scientists are making final changes to the methyl bromide risk characterization document to incorporate the National Academy of Science peer review comments. The risk characterization document for methyl bromide will be ready for distribution in April 2002.

   - ARB monitored for methyl bromide in 2000. As a follow-up to the 2000 monitoring, DPR recently completed an analysis of weather data recorded using ARB's 2000 monitoring in Kern and Monterey/Santa Cruz counties. Weather conditions during the 2000 monitoring period were compared to historical weather patterns. DPR found that weather conditions in 2000 were in the normal range compared to the previous five years. The complete weather analysis is available at <www.cdpr.ca.gov/docs/empm/pubs/reviews/em0201.pdf>. DPR will perform a similar analysis with 2001 weather data.

2. Risk Management Status

   - DPR will issue a risk management directive based on the results of 2001 air monitoring studies. Methyl bromide registrants submitted to DPR a report describing air monitoring in high use areas of Ventura and Santa Barbara counties in 2001. ARB should issue a final report on its 2001 methyl bromide monitoring in Monterey and Santa Cruz counties at the end of March. DPR should receive ARB's final report on the 2001 methyl bromide monitoring in Kern County later in the spring. DPR will prepare an analysis of these data and a risk management directive by June 2002.

- The California Rural Legal Assistance Foundation requested, and the Superior Court of California, Monterey County granted, a temporary restraining order for methyl bromide soil fumigation applications that impact the La Joya Elementary School and the Pajaro Middle School in Monterey County. DPR and the Monterey County Agricultural Commissioner appealed the Monterey County Superior Court's issuance of a preliminary injunction. The appeal stayed the preliminary injunction. The Appellate Court has not yet set a briefing schedule.

- The Environmental Defense Center et al lawsuit and the Ventura County Agricultural Association et al lawsuit have been consolidated and will be heard in San Francisco. A hearing was held on February 21, 2002. The Court has not yet issued its written decision and order. When issued, the Court's decision is expected to say that the methyl bromide regulations, which became effective in January 2001, are ordered void because DPR failed to consult with the California Department of Food and Agriculture (CDFA) as required by Food and Agricultural Code section 11454.2 and the implementing Memorandum of Agreement between DPR and CDFA. This issue was raised by the Ventura County Agricultural Association. It is expected that the Court will stay its order for 30 days to allow DPR to file emergency regulations with the Office of Administrative Law (OAL).

- DPR filed a final rulemaking package with OAL to permanently adopt the emergency regulations. This action will make permanent the emergency regulation that is now in effect. These revisions eliminate restrictions limiting field fumigations next to public roadways, and correct an improper application equipment configuration. In addition, the action will exempt employees involved in fumigation handling activities from maximum work hour restrictions if National Institute for Occupational Safety and Health certified respiratory protection is worn. OAL has until April 8, 2002, to complete their review. In the meantime, the emergency regulation remains in effect.

3. Monitoring Methodology

- RAE Systems, Inc. has developed a new hand-held detector to measure real-time air concentrations of methyl bromide. This detector has a theoretical detection limit less than current colorimetric tubes and DPR's acute target concentration of 210 parts per billion (ppb). DPR recently completed a study that compared the RAE system to other detection methods. The results were inconclusive due to uncertainties in the RAE Systems calibration procedure. The complete report can be found at the following DPR Web page: <http://www.cdpr.ca.gov/docs/empm/pubs/ehapreps/eh0105.pdf>.

IV. 1,3-DICHLOROPROPENE

- DPR has agreed to allow Dow AgroSciences (Dow) to restructure its seven-year-old program to manage the use of 1,3-dichloropropene (1,3-D). The refinements Dow has proposed will maintain existing protection of public health by minimizing long-term, problematic exposure to 1,3-D in air, while assisting growers in their transition away from methyl bromide (which is subject to a 2005 phaseout). The use of 1,3-D has been capped at 90, 250 pounds/per year/per township under a program of restrictions developed after the pesticide was reintroduced to the California market in 1995. For the next several years, use will be allowed above the cap in townships where use since 1995 has been significantly under the amount allowed by the cap. (The increase in annual use is limited to a total of 180,500 pounds, twice the 90,250-pound cap.) This refinement will use a limited, retrospective-averaging approach to modify annual township limits, while retaining the average use target level. In agreeing to allow Dow to restructure the 1995 agreement, we do not expect a large number of townships to exceed the current cap allocation; neither do we expect any townships to approach the high 1,3-D use levels seen in the 1980s. Additional information regarding these changes can be found on the following DPR Web page: <http://www.cdpr.ca.gov/docs/dprdocs/methbrom/mb_main.htm>.

V. CHLOROPICRIN

1. Risk Assessment/Data Evaluation

- On October 16, 2001, DPR placed all products containing chloropicrin into reevaluation. The reevaluation is based on data submitted under the Birth Defect Prevention Act. These data indicate that chloropicrin has the potential to cause adverse health effects at low doses. Air monitoring data submitted by the Chloropicrin Manufacturers Task Force indicate that the air levels of chloropicrin at some distances from treated greenhouses or fields could exceed the NIOSH standard of 0.1 ppm. Under the reevaluation, chloropicrin registrants are required to submit: (1) worker exposure studies for each type of chloropicrin fumigation site, and (2) ambient air quality monitoring and flux measurements from field and greenhouse applications, if methods other than the ones for which DPR already has data are to be employed.

- Chloropicrin is currently in the risk assessment process.

- ARB conducted air monitoring as described in Section I above.

VI. MITC GENERATING COMPOUNDS

1. Risk Assessment/Data Evaluation

   - The DPR toxic air contaminant risk assessment for MITC is currently being revised to address comments taken during the public comment period. It will then be scheduled for a future Science Review Panel meeting.

   - ARB will conduct air monitoring as described in Section 1.

VII. SULFURYL FLUORIDE

1. Risk Assessment/Data Evaluation

   - ARB will conduct air monitoring as described in Section 1.

   - Sulfuryl fluoride is currently in the risk assessment process.

VIII. POTENTIAL NEW FUMIGANTS

- An update on methyl bromide alternatives research can be found in the 2001 Methyl Bromide Alternatives Conference Proceedings at: <http://www.mbao.org/2001proc/mbrpro01.html>.

- Director Paul Helliker approved two research proposals for funding alternatives to methyl bromide for the Department of Pesticide Regulation's 2001-02 grant awards program. The titles of the proposals are: "Behavior Modification in Nematode Management" (principal investigator Dr. Howard Ferris, University of California, Davis), and "Nematode and Weed Suppressive Cover Crops for Sustainable Pest Management" (principal investigator Dr. Milton McGiffen, University of California, Riverside).

- It was reported at the 6th annual meeting of the Methyl Bromide Alternatives Advisory Group for California Perennial Crops held on February 4, 2002, in Parlier that InLine, an emulsified formulation of Telone C-35, was applied as a reduced-risk alternative through drip to over 2000 acres of strawberries, peppers, and cantaloupes in California last year.

- DPR has received applications from Arvesta, formerly Tomen Agro, to register products containing the active ingredient iodomethane.